

## WHAT IS CLAIMED IS:

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1. A brushless motor comprising:
    - a circuit protecting case;
    - a holder disposed on said case;
    - 5 a motor shaft rotatably held by said holder;
    - a stator disposed about said holder, said stator including a plurality of coils which surround said motor shaft;
    - a yoke fixed to said motor shaft to rotate therewith, said yoke covering said stator with a given space therebetween;
    - 10 permanent magnets held by said yoke;
    - a circuit substrate tightly held in said circuit protecting case;
    - a drive circuit arranged on said circuit substrate, said drive circuit including a switching section which switches the path of
    - 15 current directed to said coils of the stator and a control section which controls a switching timing of said switching section, said switching section including a plurality of switching elements which generate a certain heat when operated; and
    - a partition wall provided in said circuit protection case to
    - 20 partition the interior of said case into a first chamber to which the switching elements of said switching section are exposed and a second chamber to which said control section is exposed.
  2. A brushless motor as claimed in Claim 1, in which said
    - 25 partition wall is integral with and extends from a part of said case into the interior of the same, and in which said circuit substrate extends through said partition wall.
  3. A brushless motor as claimed in Claim 2, in which said
    - 30 circuit protection case is formed with a first ventilation opening through which said first chamber is communicated with the outside of said case.
  4. A brushless motor as claimed in Claim 3, in which said
    - 35 circuit protection case is further formed with a second ventilation

opening through which said second chamber is communicated with the outside of said case, and in which said partition wall is formed with a slit through which said first and second chambers are communicated.

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5. A brushless motor as claimed in Claim 4, in which said switching elements are attached to a heat sink held by said case, said heat sink having a plurality of heat radiation fins which are exposed to the outside of said case.

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6. A brushless motor as claimed in Claim 5, in which said switching elements are pressed against said heat sink by means of a spring member.

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7. A brushless motor as claimed in Claim 6, in which an inner surface of said circuit protection case is lined with a noise shielding plate of metal.

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8. A brushless motor as claimed in Claim 1, further comprising:  
terminal pins extending from the coils of said stator; and  
connecting bus bars held by an inner case installed in said circuit protection case, each connecting bus bar having one end welded to a given part of said control section of said drive circuit and the other end welded to corresponding one of said terminal pins.

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9. A brushless motor as claimed in Claim 8, in which said circuit substrate is formed with openings through which said terminal pins pass.

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10. A brushless motor as claimed in Claim 9, in which said drive circuit further comprises a filter section which filters out surges from a supplied electric power, and in which said filter section has wiring bus bars which are held by said inner case.

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11. A brushless motor as claimed in Claim 10, in which said wiring bus bars are respectively provided with connector terminals, each connector terminal being connected to the  
5 corresponding wiring bus bar via welding.

12. A brushless motor as claimed in Claim 11, in which the welded portions between the wiring bus bars and the connector terminals are embedded in said inner case.

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